

WHAT IS CLAIMED IS:

1. A pivotable laser level comprising:

a housing having an end face, a laser beam being projectable from said end face; and

5 a base, said housing being mounted on said base, said housing being pivotable about a first pivot axis relative to said base, said base having an inner planar surface and an exterior planar surface, said base being movable from a first position where said inner planar surface abuts against said housing to a canted position where said inner planar surface is spaced from said housing.

10 2. The pivotable laser level as defined in Claim 1 wherein:

said base includes a magnet, said magnet connects with said exterior planar surface.

3. The pivotable laser level as defined in Claim 1 wherein:

15 said housing includes a spirit level assembly, said spirit level assembly to be used to position said base level.

4. The pivotable laser level as defined in Claim 1 wherein:

said housing includes a beam selector which is capable of emitting different configurations of said beam from said housing, said beam selector comprising a slide plate slidably movable on said housing to be locatable in a beam projecting position from a plurality of different beam projecting positions where a different configuration of said beam is projected from each said beam projecting position.

5. The pivotable laser level as defined in Claim 1 including:

a hinge plate assembly composed of a main plate and an adjusting plate, said base being mountable on said adjusting plate, said adjusting plate being movable from an abutting position in juxtaposition with said main plate to an inclined position assuming an acute angular position relative to said main plate.

6. The pivotable laser level as defined in Claim 5 wherein:

said adjusting plate being pivotally mounted about a second pivot axis relative to said main plate.

7. The pivotable laser level as defined in Claim 6 wherein:

said second pivot axis being parallel to said first pivot axis.

8. The pivotable laser level as defined in Claim 7 wherein:

said housing having a back edge and a front end, said end face located at said front end, said back edge being spaced the total length of said housing from said front end, said first pivot axis being located directly adjacent said back edge, said second pivot axis being located substantially in alignment with said front end.

9. The pivotable laser level as defined in Claim 5 wherein:

said main plate including a plurality of height adjusting screws, each of said height adjusting screws being adjustable to vary the position of said hinge plate assembly on a supporting surface.

10. The pivotable laser level as defined in Claim 5 wherein:

said adjusting plate including an enlarged recess, said base to closely conform within said enlarged recess which precisely positions said base relative to said hinge plate assembly preventing lateral movement of said base relative to said hinge plate assembly.

11. The pivotable laser level as defined in Claim 10 wherein:

said baseplate includes a magnet, said magnet to be attached to and held onto said hinge plate assembly.

12. A laser leveling system comprising:

a housing which includes a projectable laser beam, said laser beam including a horizontal line;

5       said housing to be located in a spaced position from a vertical wall which connects with a horizontal floor with said wall and said floor forming a wall/floor joint, said housing to rest on a supporting surface which is spaced from said floor;

10       said housing being attached to a structure which permits said laser beam to be projected to said wall/floor joint and then permits said housing to be moved to project said laser beam onto and across said vertical wall and said housing can be further moved to project said laser beam to another location, said structure includes a base which is pivotally mounted by a pivot joint on said housing, said housing has an end face from which said laser beam is projected, said structure further includes said pivot joint having a first pivot axis which is transverse to said laser beam, said  
15       housing having a back edge which is located opposite said end face, said first pivot axis being located directly adjacent said back edge.

13. The laser leveling system as defined in Claim 12 wherein:

said structure further includes a hinge plate assembly composed of a main plate and an adjusting plate, said base being mounted by mounting means on said adjusting plate, said adjusting plate being movable from an abutting position in juxtaposition with said main plate and an inclined position assuming an acute angular position relative to said main plate.

14. The laser leveling system as defined in Claim 13 wherein:

said structure further including said adjusting plate being pivotally mounted about a second pivot axis.

15. The laser leveling system as defined in Claim 14 wherein:

said second pivot axis being parallel to said first pivot axis.

16. The laser leveling system as defined in Claim 15 wherein:

said second pivot axis being located substantially in alignment with said end face.

17. The laser leveling system as defined in Claim 13 wherein:

said mounting means comprising a magnet, said magnet to be attracted to and held onto said adjusting plate.

18. The laser leveling system as defined in Claim 13 wherein:

said structure including said adjusting plate having an enlarged recess,  
said base to closely conform within said enlarged recess in a removable engagement  
manner which precisely positions said base relative to said hinge plate assembly  
5 preventing lateral movement of said base relative to said hinge plate assembly.

19. The laser leveling system as defined in Claim 13 wherein:

said structure further including said main plate having a plurality of  
height adjusting screws, each of said screws being adjustable to vary the spacing of  
said hinge plate assembly on a supporting surface.

20. The laser leveling system as defined in Claim 13 wherein:

said main plate having a pair of alignment marks, said alignment marks  
to be utilized in conjunction with separate marks located on the supporting surface  
in order to make known to the user the precise position of location for said laser  
leveling system.

21. A pivotable laser level comprising:

a housing having an end face, a laser beam being projectable from said end face;

5 a base, said housing being mounted on said base, said housing being pivotable about a first pivot axis relative to said base in a clockwise direction; and

said base to be mountable on a hinge plate assembly, said housing also being pivotable on said hinge plate assembly about a second pivot axis in a counterclockwise direction, whereby the direction of propagation of said laser beam can be varied at least ninety degrees.

10 22. The pivotable laser level as defined in Claim 21 wherein:

said direction of projection can be varied approximately one-hundred and thirty-five degrees.

23. A method of using a laser level comprising the steps of:

utilizing a housing from which is projected a laser beam;

pivotaly connecting said housing on a base where said housing can be pivoted in a clockwise direction within a first range of motion;

5 mounting said base on a hinge plate assembly which includes an adjusting plate that is pivotable in a counterclockwise direction relative to a main plate within a second range of motion;

mounting said housing, base and hinge plate assembly on a supporting surface which is spaced from a floor;

10 projecting said laser beam onto a wall which connects to the floor at a wall/floor joint;

moving said laser beam to align with said wall/floor joint and where said laser beam is projected to the wall; and

15 moving said laser beam to be projected only on the wall and spaced from the wall/floor joint to produce a horizontal line on the wall that is parallel to the wall/floor joint.

24. The method as defined in Claim 23 wherein the first range of motion is within ninety degrees and the second range of motion is within forty-five degrees.



25. The method as defined in Claim 23 wherein the first moving step includes adjusting the position of the hinge plate assembly relative to the supporting surface.

26. A laser leveling system comprising:

5 a housing structure which includes a projectable laser beam with said beam to be projected in a vertically oriented plane and a horizontally oriented plane producing a vertical reference line on a wall and also producing a horizontal reference line on a wall, said housing structure permits said laser beam to be moved on the wall so said horizontal reference line can be moved to assume various height  
10 positions on the wall, said housing to rest on a supporting surface which is spaced from said vertical wall; and

said housing structure includes a spirit level assembly which is to be used to level said housing structure which will also produce a level said horizontal reference line when said vertically oriented plane is perpendicular to the wall, said  
15 housing structure also including means for marking the resting position of said housing structure on the supporting surface so if by chance said housing is accidentally moved from its resting position, and then said reference line is no longer level, the user can replace said housing structure back to said resting position so said reference line will then be again level.

27. The laser leveling system as defined in Claim 26 wherein:

said housing structure includes a first pivot joint that permits said laser beam to be moved to illuminate above grade with grade being defined when said horizontally oriented plane is level.

5 28. The laser leveling system as defined in Claim 27 wherein:

said housing structure includes a second pivot joint that permits said laser beam to be moved to illuminate below said grade.

29. The laser leveling system as defined in Claim 26 wherein:

10 said means for marking includes a pair of longitudinally aligned notches formed in said housing structure, said notches to be used to be connectable with a writing instrument to make a pair of marks on the supporting surface.